

To: Daniel Telvock[dtelvock@investigativepost.org]
Cc: Basile, Michael[Basile.Michael@epa.gov]; Daly, Eric[Daly.Eric@epa.gov]
From: Rodriguez, Elias
Sent: Wed 6/15/2016 3:32:06 PM
Subject: RE: Interview - Friday June 10, 2106 - 10:30 am

Hello Mr. Telvock, Subsequent to EPA providing you an interview (June 10) with Eric Daly, On-Scene Coordinator for EPA, you called me and posed additional questions.

You asked about the history if the Site. In response, we are providing you with the Site History as we understand it. (Please see below).

In regards to your questions about health impacts. You may wish to submit your health questions to the appropriate State or County health agency.

Thank you,

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Site History (Removal Program) Niagara Falls Boulevard Site, Niagara Falls New York)

In 1978, the U.S. Department of Energy (DOE) conducted an aerial radiological survey of the Niagara Falls region and found more than 15 properties, including the Site, having elevated levels of radiation above background levels. It is believed that, in the early 1960s, slag from the Union Carbide facility located on 47th Street in Niagara Falls was used as fill on the properties prior to paving.

During the Pre-Remedial assessment, the term “slag” was used to designate the first foot of soil comprising of mainly rock-like and/or clay-type material that could easily be crushed into a fine powder. The slag was shown to have the highest concentration of Ra-226, Ra-228, U-238 on the Site and exhibited the great contribution to exposure rates and dose rates to the public. During Removal Action assessment, soil samples were taken along the perimeter of the Site and were taken at various depths from surface to three feet. In general throughout this document the term “soil” sample has been used to for both slag and non-slag soil samples. For samples specific to the Pre-Remedial Assessment, the term “slag” is used only for the first foot of soil containing rock-like and/or clay-type material.

From September 2006 through July 2013, New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) conducted radiological surveys of the interior and exterior of both parcels. The only interior spaces with elevated exposure rate readings were located in an office area and warehouse space of GNBC. The exposure rate readings obtained in these spaces were roughly ten times above the background readings. The exterior readings taken at waist height (approximately 3 feet off the ground surface) of both parcels were as high as thirty times background. Further investigation and sampling were performed on the exterior areas of the Site including two biased samples of contaminated fill material were collected from locations that exhibited elevated readings. One of the samples was collected from an area of loose blacktop and indicated readings of approximately 171 times greater than background. The other samples were obtained from a slag pile located in a marshy area north of the parking lot that indicated readings greater than 200 times greater than background.

From September 2013 through December 2013 USEPA Pre-Remedial Program conducted radiological surveys of the exterior of both parcels and confirmed previous work performed by NYSDEC and NYSDOH. See Attachment C for gamma survey of the exterior surface of the Site. To quantify the contamination identified, a total of 19 soil samples (including one environmental duplicate sample) were collected from 15 boreholes throughout the main footprint of the Site using hollow-stem auger drilling methods. Two soil samples were collected on the adjacent First Assembly Church property to document background conditions. Per the “2013-2014 EPA Pre-Remedial Assessment Report,” the maximum concentration of the radionuclides of concern were Ra-226 at 199 pCi/g, and Ra-228 at 807 pCi/g.

From July 2015-August 2015, the USEPA Region 2 Removal Program conducted further radiological assessment of the interior and exterior of both parcels. The goal for this assessment was to determine the extent of contamination (i.e. how far does the contamination extend beyond the Site boundary determined by Pre-Remedial Program in 2013), as well as, determine interior contamination impacts (i.e. are workers exposed to elevated levels of radon/thoron or loose

contamination). As reported from the Pre-Remediation Program, the office area and warehouse space located at GNBC showed elevated readings of roughly 25 times higher than background. Specific sections of the RBC also exhibited elevated gamma radiation levels. The walk-in cooler of the RBC building gamma survey readings were as high as 4 times background and the north end rear vestibule gamma survey readings were as high as 6 times background. Again, as documented by the Pre-Remedial Program, the exterior area of the Site showed the highest elevation of contamination at roughly 30 times background. From the data and history of the site, the elevated readings of the interior areas located at both properties are likely to be due to newer additions of the buildings built on top of fill dirt.

USEPA Region 2 Removal Program took a total of sixteen (16) soil samples including one environmental duplicate sample. Fifteen (15) boreholes were collected throughout the perimeter of the Site using hollow-stem auger drilling methods. See Attachment D for soil sample results of Pre-Remedial Assessment and Removal Action Assessment. The other samples were soil samples collected on the adjacent First Assembly Church property to document background conditions. Per the 2015 EPA Removal Site Evaluation data, the maximum concentrations of the radionuclides of concern in the outdoor samples were Ra-226 at 4.60 pCi/g and Ra-228 at 13.6 pCi/g. The extent of depth of contamination was determined to be at a two foot depth where majority of elevated exposure rates was due to the slag located in the first foot depth of the exterior surface.

The U.S. Environmental Protection Agency (EPA) issued guidance entitled “Establishment of Cleanup Levels for CERCLA Sites with Radioactive Contamination” (OSWER No. 9200.4-18, August 22, 1997). This 1997 guidance provided clarification for establishing protective cleanup levels for radioactive contamination at CERCLA sites. As outlined in 40 CFR § 300.430(e)(2)(I)(A)(1), the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) provides that, for carcinogens, preliminary remediation goals should generally be set at levels that represent an upper-bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} when Applicable or Relevant and Appropriate Requirements (ARARs) are not available or are not sufficiently protective.

Since removal actions are not a part of the remedial program, removal is not mandated to meet the risk requirements of 10^{-4} to 10^{-6} for site cleanups. However, in recent years, EPA has encouraged removal cleanups to meet, at a minimum, the remedial cleanup values associated with the 10^{-4} carcinogenic risk based on the reasonable maximum exposure for an individual. To determine if contamination levels exceed the cancer risk of 10^{-4} (i.e. 1 in 10,000 of cancer), a risk assessment must be performed. EPA’s Preliminary Remediation Goal (PRG) Calculator was created to help calculate risk vs. cleanup levels for various receptors taking into consideration exposures from all potential pathways, and through all media (e.g., soil, ground water, surface water, sediment, air, structures, etc.). The most conservative receptor used for determining the

cleanup values for the removal was the scenario involving a composite worker whose daily duties included both indoor and outdoor activities. The cleanup value established for the site, based on an increase of 10^{-4} cancer risk, are:

Radium-226 at levels in excess of 2.48 picocuries per gram (pCi/g)

Radium-228 at levels in excess of 15.90 picocuries per gram (pCi/g)

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